

Radial Freeway

Strategic Improvement Plan



I-20 West

Corridor Resource Guide

Radial Freeway Strategic Improvement Plan

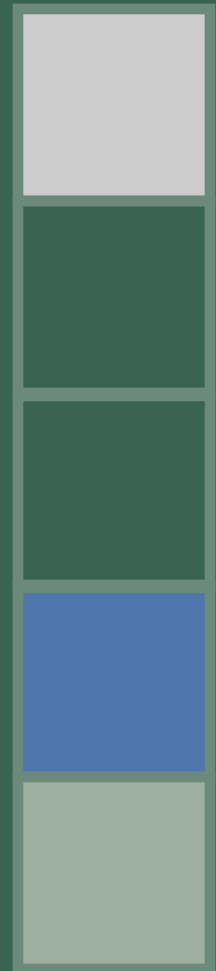




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- Corridor Overview
- *Envision6* RTP -
Programmed and
Planned Projects



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Introduction



This Corridor Resource Guide documents the current (2007) and forecast (2030) travel conditions along I-20 from I-285 to Liberty Road. The Guide also provides detail on planned and programmed projects that are included in the Atlanta Region's *Envision6* RTP along this section of I-20.



Corridor Overview

Segment 1: From I-285 to SR 6

Length = 7 miles

Average Interchange Spacing =
1.75

3 GP Lanes, No HOV lane

Parallel Corridors: US 78, SR 70

Segment 2: From SR 6 to SR 92

Length = 7 miles

Average Interchange Spacing =
3.5

3 GP Lanes, No HOV lane

Parallel Corridors: US 78

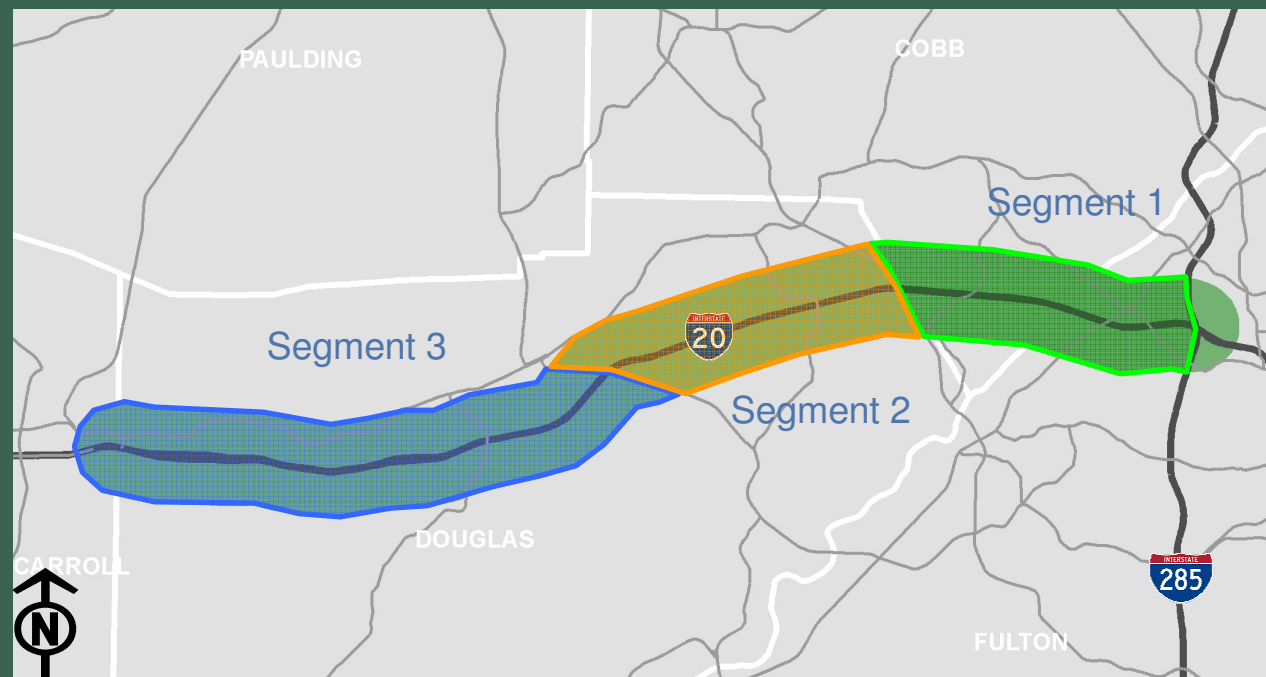
Segment 3: From SR 92 to Liberty Road

Length = 11 miles

Average Interchange Spacing =
2.75

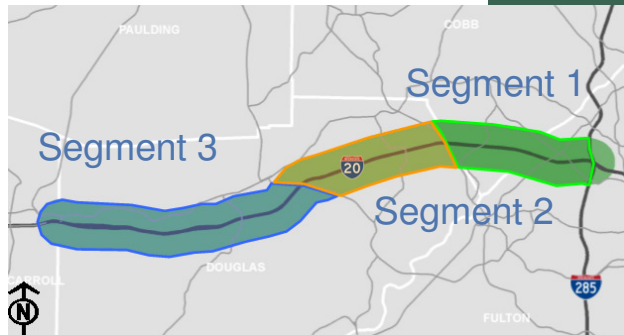
3 GP Lanes, No HOV lane

Parallel Corridors: US 78





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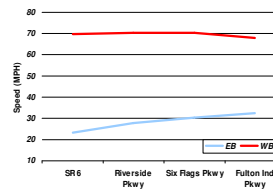


EXISTING TRAVEL SPEED 1

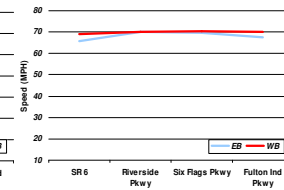
EXISTING TRAVEL TIME 1

segment 1

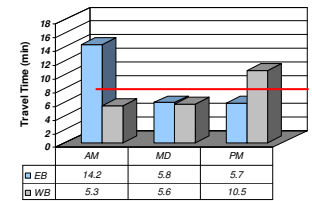
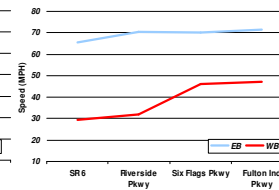
AM Peak Period



Midday Period



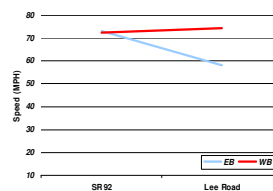
PM Peak Period



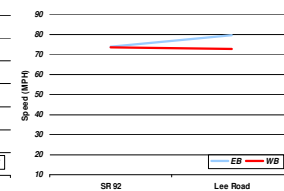
Travel Time (6.0 min)
Based on speed of 65 mph

segment 2

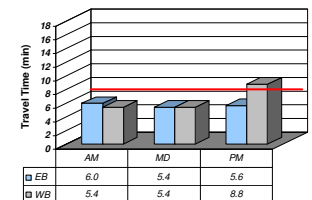
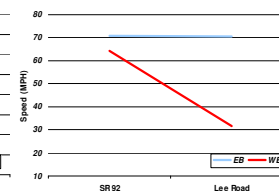
AM Peak Period



Midday Period



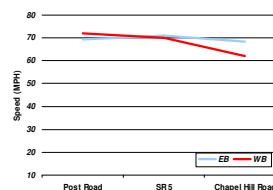
PM Peak Period



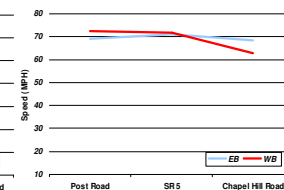
Travel Time (6.1 min)
Based on speed of 65 mph

segment 3

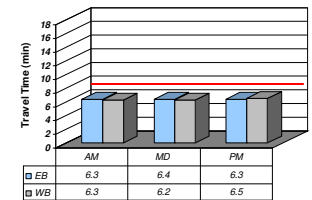
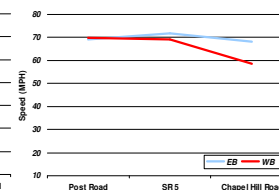
AM Peak Period



Midday Period



PM Peak Period



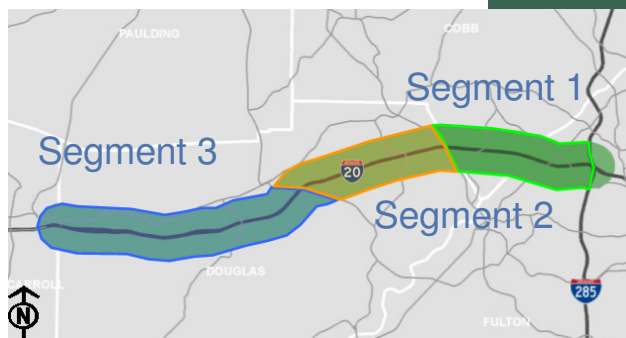
Travel Time (6.7 min)
Based on speed of 65 mph

AM Period = 7:00 AM to 10:00 AM
Midday Period = 10:00 AM to 3:00 PM
PM Period = 3:00 PM to 7:00 PM

1 – Based on 2007 Field Data



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TRAVEL TIME INDEX
(TTI) ¹

DURATION OF
CONGESTION ¹

VOLUME/ CAPACITY (V/C)
RATIO ¹

Segment 1

- 2005 TTI = 3.00
- 2030 TTI = 3.66
- Percent Increase = 22%

CMTF Target TTI = 1.35

- 2005 Daily Congestion = 5.43 hours
- 2030 Daily Congestion = 5.93 hours
- Percent Increase = 9%

- 2005 V/C Ratio = 1.04
- 2030 V/C Ratio = 1.10
- Percent Increase = 5%

Segment 2

- 2005 TTI = 2.15
- 2030 TTI = 3.87
- Percent Increase = 80%

CMTF Target TTI = 1.35

- 2005 Daily Congestion = 3.03 hours
- 2030 Daily Congestion = 5.98 hours
- Percent Increase = 98%

- 2005 V/C Ratio = 0.95
- 2030 V/C Ratio = 1.12
- Percent Increase = 17%

Segment 3

- 2005 TTI = 1.46
- 2030 TTI = 2.25
- Percent Increase = 54%

CMTF Target TTI = 1.35

- 2005 Daily Congestion = 0.33 hours
- 2030 Daily Congestion = 2.06 hours
- Percent Increase = 530%

- 2005 V/C Ratio = 0.76
- 2030 V/C Ratio = 0.96
- Percent Increase = 26%

TTI = Congested Travel Time / Free Flow Travel Time
Congestion Management Task Force (CMTF)
Target TTI = 1.35

Duration of congestion represents the amount of time transportation networks are congested
Daily Congestion = Number of Congested Hours (Above an "Acceptable" V/C of 0.90)

¹ – Based on Model Data (Envision 6)



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Strategic Improvement Plan

Programmed and Planned Project Types

Envision6 Project Types



- Roadway Operational Upgrades
- Roadway Maintenance / Operations
- ITS-Smart Corridor
- General Purpose Roadway Capacity
- **Managed Lanes - Auto/Bus and Truck***
- **Transit Facilities***
- Bridge Capacity
- Bridge Upgrade
- Interchange Capacity
- **Interchange Upgrade***
- Fixed Guideway Transit Capital
- Studies

*Project types for I-20 W



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Strategic Improvement Plan

Envision6 Programmed and Planned Projects

Segment 1: From I-285 to SR 6

Fixed Guideway Transit

- From H.E. Holmes MARTA Rail Station to Fulton Ind. Boulevard

Interchange Upgrade

- I-285 West at I-20 West

Managed Lanes

- From SR 280 to SR 6

Segment 2: From SR 6 to SR 92

Managed Lanes

- From SR 6 to Bright Star Road

Transit Facility

- SR 20 at Thornton Road

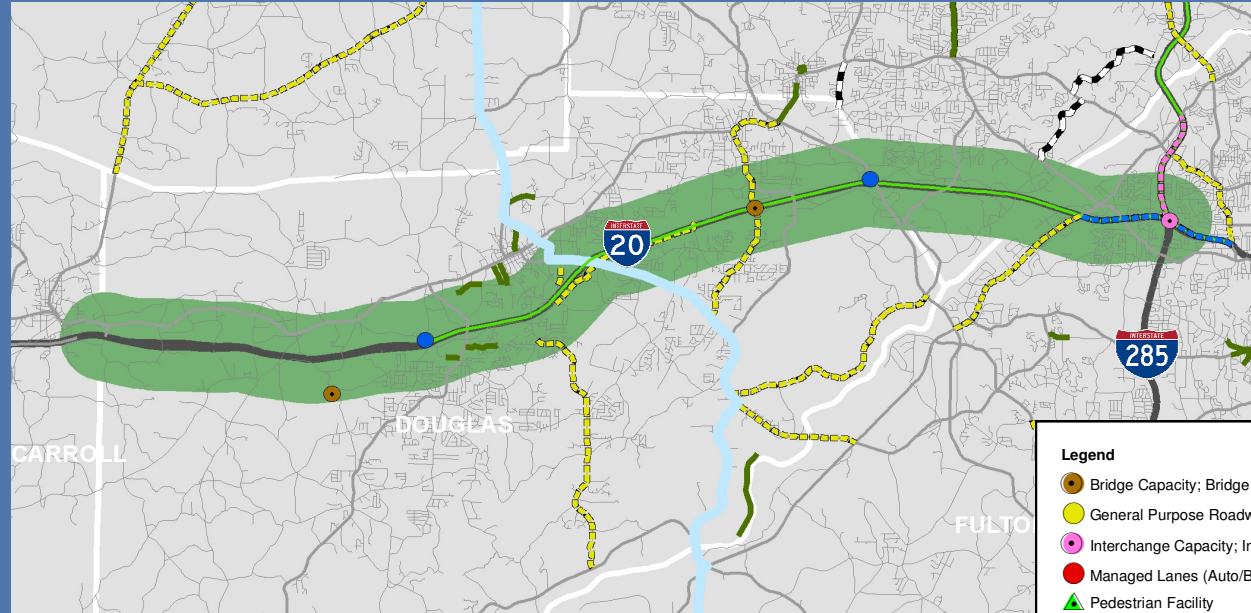
Segment 3: From SR 92 to Liberty Road

Managed Lanes

- From SR 6 to Bright Star Road

Transit Facility

- In the vicinity of Bright Star Road



Legend

- Bridge Capacity; Bridge Upgrade
- General Purpose Roadway Capacity
- Interchange Capacity; Interchange Upgrade
- Managed Lanes (Auto/Bus)
- ▲ Pedestrian Facility
- Roadway Operational Upgrades
- Studies
- Transit Facilities
- Bridge Capacity; Bridge Upgrade
- General Purpose Roadway Capacity
- Interchange Capacity; Interchange Upgrade
- Managed Lanes (Auto/Bus)
- Multi-Use Bike / Ped Facility
- Roadway Maintenance/Operations/Upgrades
- Studies
- Transit Facilities
- ITS-Smart Corridor; ITS-Other



Radial Freeway
Strategic Improvement Plan

Envision6 Programmed and Planned Projects

I-20 and I-285 Interchange Reconstruction

ARC ID – AR-939

Type – Interchange Upgrade

Status – Programmed

Phase – Preliminary Engineering

Fiscal Year – 2008

Total Phase Cost

\$17,500,000

I-20 and I-285 Interchange Reconstruction

ARC ID – AR-939

Type – Interchange Upgrade

Status – Programmed

Phase – Right-of-Way

Fiscal Year – LR 2014-2020

Total Phase Cost

\$10,000,000

I-20 and I-285 Interchange Reconstruction

ARC ID – AR-939

Type – Interchange Upgrade

Status – Programmed

Phase – Construction

Fiscal Year – LR 2014-2020

Total Phase Cost

\$70,000,000

Project Summary

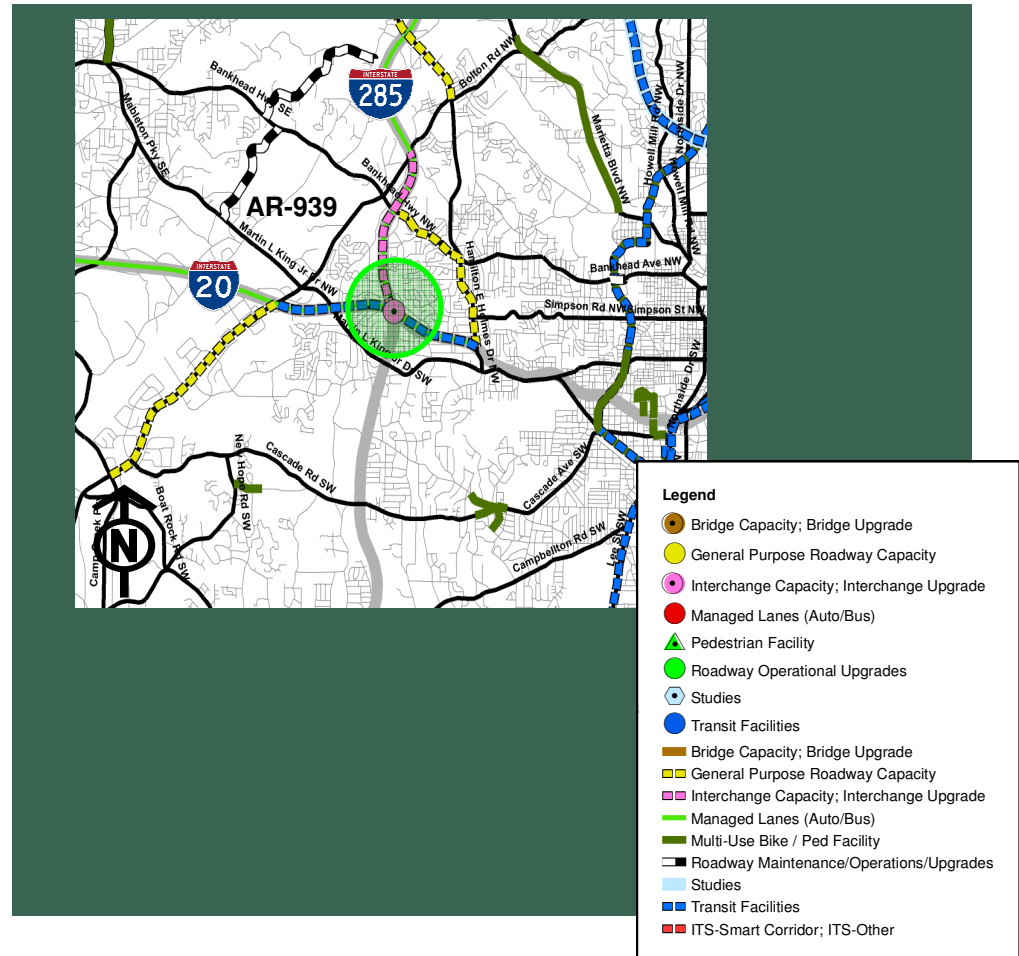
Congressional District 5

Sponsor – GDOT

Jurisdiction – City of Atlanta

Total Project Cost

\$97,500,000





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Envision6 Programmed and Planned Projects

I-20 West Bus Rapid Transit (BRT) from H.E. Holmes MARTA Rail Station to Fulton Industrial Boulevard

ARC ID – M-AR-287

Type – Fixed Guideway Transit

Status – Long Range

Phase – Preliminary Engineering

Fiscal Year – LR 2014-2020

Total Phase Cost

\$1,000,000

I-20 West BRT from H.E. Holmes MARTA Rail Station to Fulton Industrial Boulevard

ARC ID – M-AR-287

Type – Fixed Guideway Transit

Status – Long Range

Phase – Construction

Fiscal Year – LR 2014-2020

Total Phase Cost

\$30,000,000

Project Summary

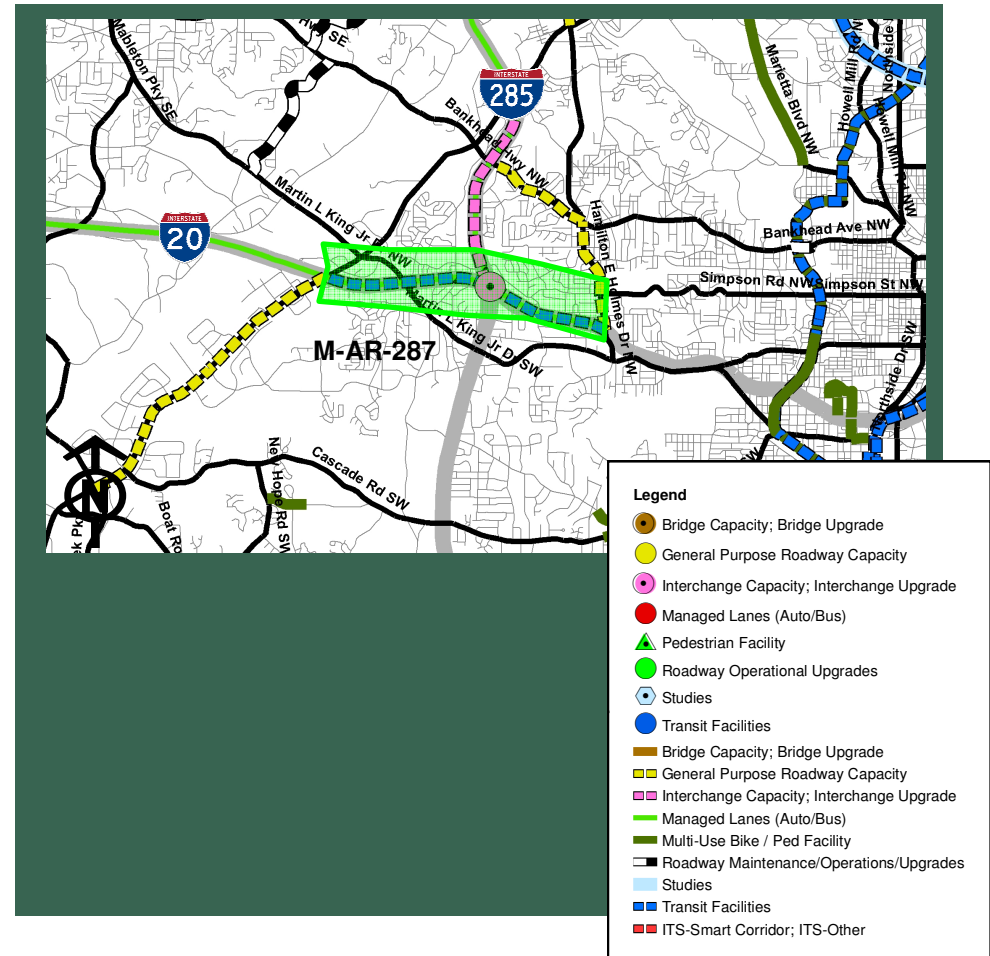
Congressional District 5

Sponsor – MARTA

Jurisdiction – City of Atlanta

Total Project Cost

\$31,000,000





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Envision6 Programmed and Planned Projects

I-20 West Managed Lanes
From SR 280 (H.E. Holmes Drive) in City of Atlanta to SR 6 (Thornton Road) in Douglas County

ARC ID – AR-H-200

Type – Managed Lanes

Status – Long Range

Phase – Right-of-Way

Fiscal Year – LR 2014-2020

Total Phase Cost

\$17,916,000

I-20 West Managed Lanes
From SR 280 (H.E. Holmes Drive) in City of Atlanta to SR 6 (Thornton Road) in Douglas County

ARC ID – AR-H-200

Type – Managed Lanes

Status – Long Range

Phase – Construction

Fiscal Year – LR 2014-2020

Total Phase Cost

\$252,879,000

Project Summary

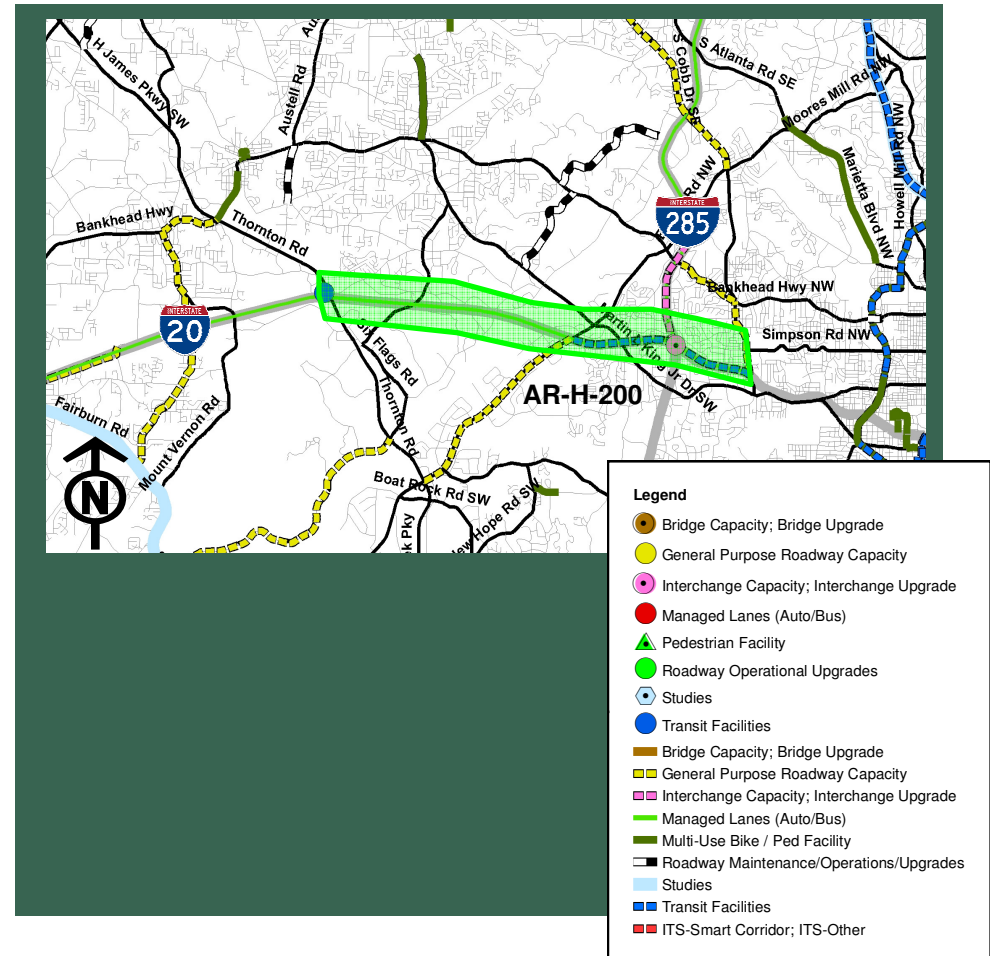
Congressional Districts 5 & 13

Sponsor – GDOT

Jurisdiction – Multi-County

Total Project Cost

\$270,795,000





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Envision6 Programmed and Planned Projects

I-20 West Managed Lanes from SR 6 (Thornton Road) to Bright Star Road

ARC ID – AR-H-201

Type – Managed Lanes

Phase – Right-of-Way

Fiscal Year – 2008 / LR 2014 – 2020

Total Phase Cost

\$26,223,000

I-20 West Managed Lanes from SR 6 (Thornton Road) to Bright Star Road

ARC ID – AR-H-201

Type – Managed Lanes

Phase – Construction

Fiscal Year – LR 2014 – 2020

Total Phase Cost

\$152,000,000

Project Summary

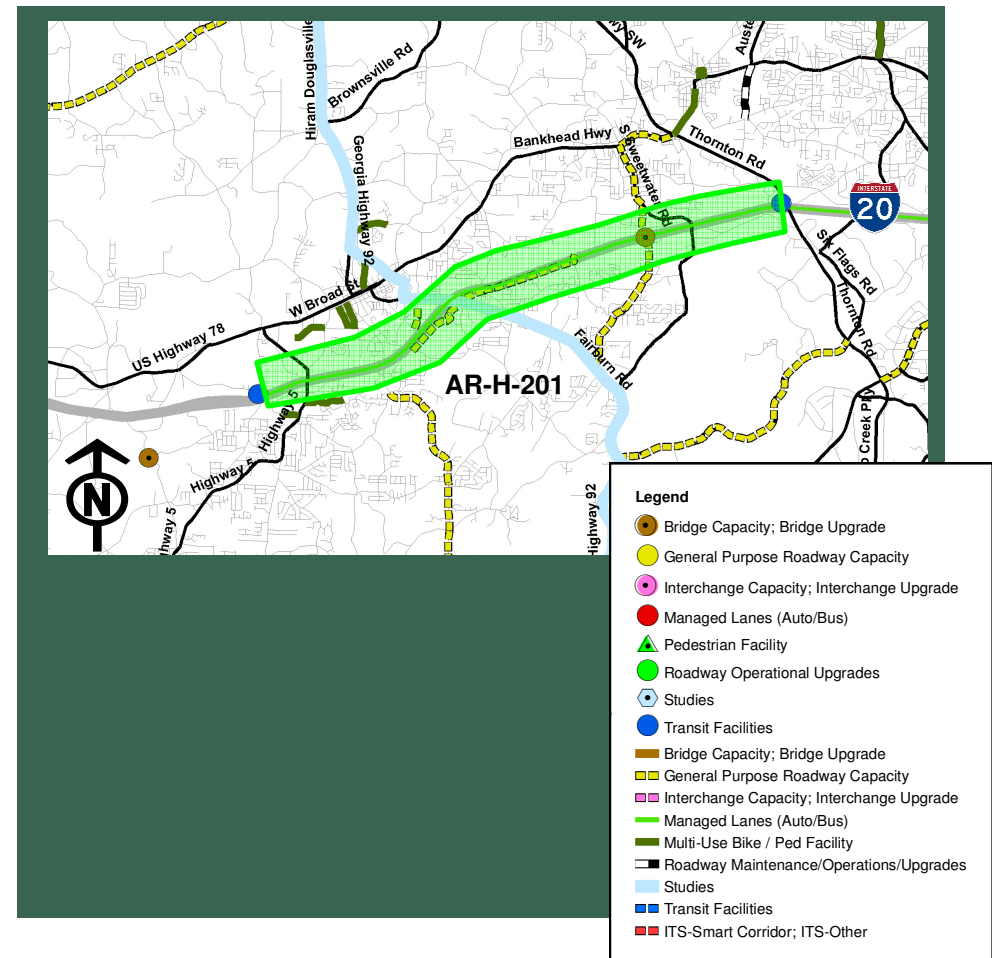
Congressional District 13

Sponsor – GDOT

Jurisdiction – Douglas County

Total Project Cost

\$178,223,000





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Envision6 Programmed and Planned Projects

BRT Facilities at I-20 West at Thornton Road

ARC ID – AR-606

Type – Transit Facility

Status – Programmed

Phase – Construction

Fiscal Year – 2008

Total Phase Cost

\$3,500,000

Project Summary

Congressional District 13

Sponsor – GRTA

Jurisdiction – Cobb County

Total Project Cost

\$3,500,000

BRT Facilities at I-20 West in the vicinity of Bright Star Road

ARC ID – AR-616

Type – Transit Facility

Status – Programmed

Phase – Construction

Fiscal Year – 2009

Total Phase Cost

\$3,600,000

Project Summary

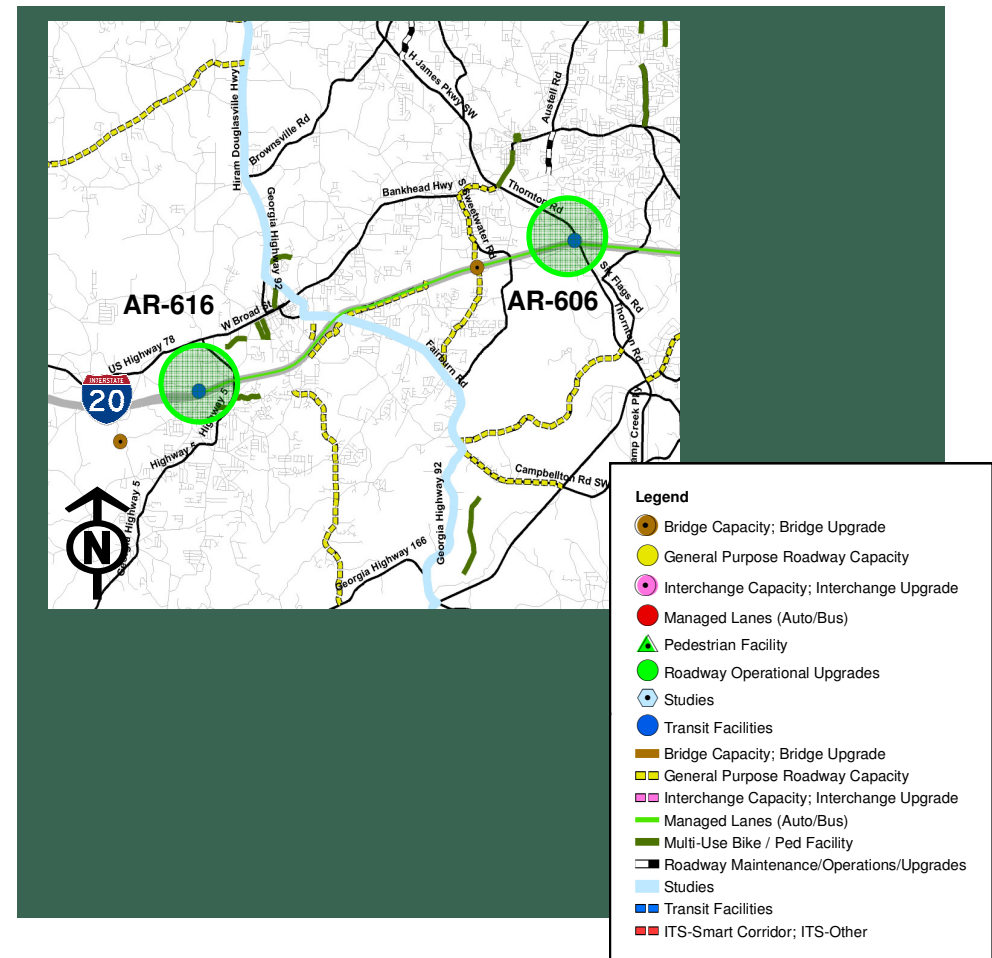
Congressional District 13

Sponsor – GRTA

Jurisdiction – Douglas County

Total Project Cost

\$3,600,000





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Funding Sources

Envision6 Project Funding Sources For I-20 West

Federal

\$234,911,200 (40%)

State

\$58,727,800 (10%)

Local

\$31,000,000 (5%)

Bond

\$259,979,000 (45%)

Total Corridor Investment

\$584,618,000

